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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,185	03/14/2002	Randall L. Barbour	0887-4170	8875

7590

12/28/2005

Morgan & Finnegan
345 Park Avenue
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EXAMINER

STAFIRA, MICHAEL PATRICK

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/088,185

Applicant(s)

BARBOUR ET AL.

Examiner

Michael P. Stafira

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 18 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 5-17, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

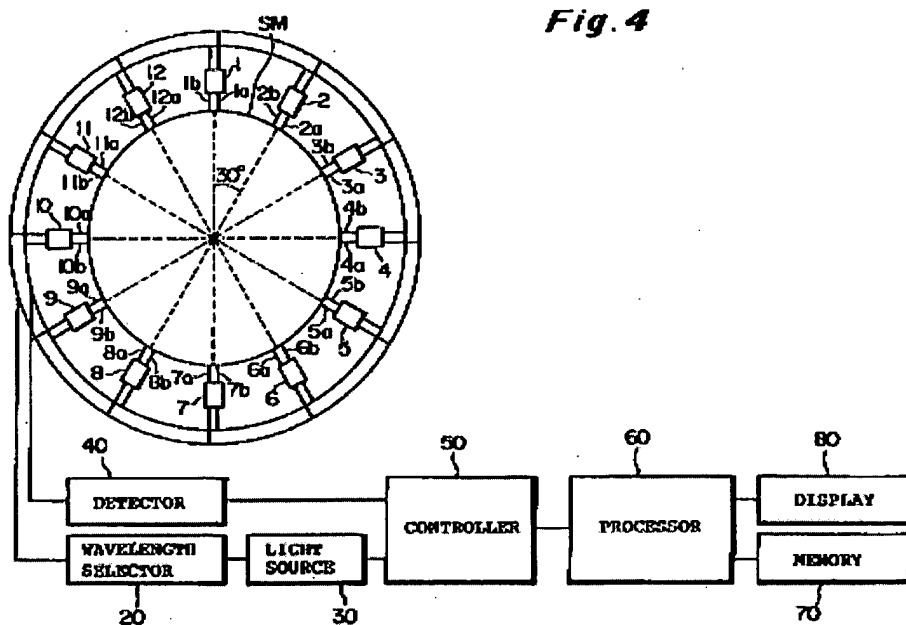
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 18, 21-23 rejected under 35 U.S.C. 102(e) as being anticipated by Ueda et al. ('610).

Claim1

Ueda et al. ('610) discloses providing a source (Fig. 4, Ref. 30) for directing at least one wavelength of energy into a target medium (Fig. 4, Ref. SM); providing a detector (Fig. 4, Ref. 40) for measuring energy diffusely scattered near infrared energy (Col. 15, lines 16-18) emerging from the target medium (Fig. 4, Ref. SM); selecting at least one wavelength of near infrared energy (Fig. 4, Ref. 20), wherein at least one wavelength of energy is selected to maximize the total path length of energy propagating from the source (Fig. 4, Ref. 30) to a detector (Fig. 4, Ref. 40) and to maintain an acceptable energy density at the detector (Fig. 4, Ref. 40)(Col. 14-15, lines 65-22); directing (Fig. 4, Ref. 20) at least one selected wavelength of near infrared energy into the target medium (Fig. 4, Ref. SM); and measuring (Fig. 4, Ref. 40) at least one wavelength of diffusely scattered near infrared energy emerging from the target medium (Fig. 4, Ref. SM)(Col. 15, lines 23-45).



Claim 2

The reference of Ueda et al. ('610) discloses the total path length is the sum of a plurality to total mean free path lengths a particle of near infrared energy travels as it propagates through the medium from the light source (Col. 16-17, lines 52-2).

Claim 3

Ueda et al. ('610) further discloses a single detector is provided (Fig. 4, Ref. 40).

Claim 4

Ueda et al. ('610) further discloses a plurality of detectors are provided at a plurality of distances from the source (See Fig. 11)

Claim 18

Ueda et al. ('610) discloses providing a source (Fig. 4, Ref. 30) for directing at least one wavelength of energy into the target medium (Fig. 4, Ref. SM); providing a detector (Fig. 4, Ref. 40) for measuring diffusely scattered near infrared energy (Col. 15, lines 16-18) emerging from

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the target medium (Fig. 4, Ref SM); directing (Fig. 4, Ref. 20) a wavelength of near infrared energy into the target (Fig. 4, Ref. SM); measuring the emerging diffusely scattered near infrared energy from the target with at least one detector (Fig. 4, Ref. 40); adjusting the wavelength (Fig. 4, Ref. 20) of the energy based on the measured emerging diffusely scattered near infrared energy to maximize the total path length and maintain an acceptable energy density at a detector (Fig. 4, Ref. 40) and selecting at least one wavelength of energy having a maximized total path length from the source to at least one detector (Col. 14-15, lines 65-22).

Claim 21

Ueda et al. ('610) discloses providing a source (Fig. 4, Ref. 30) for directing at least one wavelength of near infrared (Col. 15, lines 16-18) energy into a target medium (Fig. 4, Ref. SM) wherein the at least one wavelength is selected to maximize the total path length of near infrared energy propagating from the source to a detector (Fig. 4, Ref. 40) and to maintain an acceptable energy density at the detector (Fig. 4, Ref. 40)(Col. 14-15, lines 65-22); providing a detector (Fig. 4, Ref. 40) for measuring diffusely scattered near infrared energy emerging from the target medium (Fig. 4, Ref. SM); directing at (Fig. 4, Ref. 20) least one selected wavelength of near infrared energy into the target medium (Fig. 4, Ref. SM); and measuring (Fig. 4, Ref. 40) at least one wavelength of diffusely scattered near infrared energy emerging from the target medium (Fig. 4, Ref. SM).

Claim 22

Ueda et al. ('610) discloses a means (Fig. 4, Ref. 20) for selecting at least one wavelength of near infrared energy; wherein the at least one wavelength of near infrared energy is selected to maximize the total path length of near infrared energy (Col. 14, lines 16-18) propagating from

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the source to a detector (Fig. 4, Ref. 40) and to maintain an acceptable energy density at the detector (Fig. 4, Ref. 40)(Col. 14-15, lines 65-22); a source (Fig. 4, Ref. 30) for directing at least one wavelength of near infrared energy into a target medium (Fig. 4, Ref. SM); and a detector (Fig. 4, Ref. 40) for measuring diffusely scattered near infrared energy emerging from the target medium (Fig. 4, Ref. SM); a means for reconstructing (Col. 20, lines 32-40) an image of the properties of the target medium (Fig. 4, Ref. SM).

Claim 23

Ueda et al. ('610) discloses a source (Fig. 4, Ref. 30) for directing at least one wavelength of near infrared energy (Col. 14, lines 16-18) into a target medium (Fig. 4, Ref. SM), wherein the at least one wavelength is selected (Fig. 4, Ref. 20) to maximize the total path length of near infrared energy propagating from the source (Fig. 4, Ref. 30) to a detector (Fig. 4, Ref. 40) and to maintain an acceptable energy density at the detector (Fig. 4, Ref. 40); a detector (Fig. 4, Ref. 40) for measuring diffusely scattered near infrared energy emerging from the target medium (Fig. 4, Ref. SM); and a means for reconstructing an image of the properties of the target medium (Col. 20, lines 32-40).

Allowable Subject Matter

3. Claims 5-17, 19, 20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments, see Amendment after Non-Final rejection, filed September 30, 2005, with respect to the rejection(s) of claim(s) 1-1-4, 18, 21-23 under U.S.C. 102(e) & 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ueda et al. ('610).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

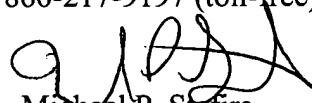
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael P. Stafira
Primary Examiner
Art Unit 2877

December 13, 2005